CANADIAN SCHOOL

OF

TAXIDERMY

CORRESPONDENCE COURSE

LESSONS I–III

How To Skin Birds

PREPARED BY THE

REV. P. IVESON THACKER

FOR EXCLUSIVE USE OF THE

CANADIAN SCHOOL, REGINA, SASK.

ROULEAU, SASK. :
THE ENTERPRISE PRINT

734

LESSONS I–III

The art of taxidermy is one of the fine arts. It is also one of the most fasinating and profitable professions it is possible to enter and the only one that is not overcrowded. Its work is practically to preserve in lifelike form animals, birds and reptiles, many of which are fast passing away and will in a few years be of great value. The great requisite of this work is patience, perseverance and plenty of time. Don't get discouraged. I remember my first bird, a mud hen with a battered head. My good father and I undertook to mount it, neither knowing anything about it. What desperate efforts we made to skin it! How we stuffed it with hay, carved a head out of a piece of wood and inserted wires, and when it was sewn up and placed on a board, instead of standing up like a decent hen, persisted in making ungainly obeisances to the table. But perserverance, patience and practice wrought all things and while our first specimens are things of the past, our birds and animals of today are alert, lifelike and are masterpieces of the Taxidermist's art.

There is nothing hard about the work. Use your eyes, think study nature, follow our lessons, ask questions if you do not understand and in a short time you will be able to do good and make money for yourself.

You have your bird—a black bird, pigeon or crow are a proper size of bird to commence work upon. Do not attempt to handle ducks or long legged birds until you have skinned and mounted a number of other ordinary birds.

Place on the table your knife or scalpel, some cornmeal for absorbent purposes, a pad of absorbent cotton and your arsenic.

Now take your scalpel and commencing near the centre of the breast bone separate the feathers and you will discover a spot in most birds destitute of feathers running down the breast bone to the vent. A little gasoline on a piece of cotton batting will enable you to part the feathers to each side of this bare strip of skin.

With your scalpel cut the skin on the breast. Start about a third of the way up the breast, bone from the stomach; you do not want to cut any more skin on the breast than is necessary Cut slowly down to the vent.

Cut a little at a time and be careful not to cut into the stomach or you will wish you had never seen the bird. Holding the skin in the grasp of your finger and thumb, press the flesh away from it with the handle of your scalpel and skin down the sides and over the abdomen to the tail. As you lift the skin from the breast and the sides you will find the knee of the bird.

Shove it up from the outside, press back the skin, cut the cartilage at the top and sever the joint. Scrape off all the flesh, leave the bone attached and do the same with the other leg. See Figure 1a.

Press the skin away from the sides with your finger and the scalpel and work down to the tail. Sometimes you can work your finger under the back bone to the base of the tail and then cut through the back bone

At others it is best to stand the bird on its breast and pull back the tail and when you have skinned down below the vent cut through and sever the back bone. Plug the severed vent with absorbent cotton if any juices escape. Having severed the back bone at the tail, separate the skin by cutting and gently pulling until you reach the part of the leg that remains in the body. Tie a piece of string to this or better still get a large fish hook, file off the barb, attach it to a stout cord, run the hook into the back of the bird and hang up at a convenient height to work. Now, little by little with the handle of your scalpel and knife separate the skin from the back and

sides. Work down until you are over the shoulders, pull down the skin on the wings until you reach the broken wing bones and then cut through the wing. Take out all the flesh you can. Pull the skin down over the breast and neck until you reach the skull.

Now go carefully. You will come first to the ears. Here dig close to the skull and you will be able to free the skin. It is tender but do not be afraid, you can do it. Pull your skin firmly down toward the beak and you will soon come to the eye, cut out the cartilage of the eye near to the side of the eye-socket next to the ear until the eye is revealed. Now with a circular motion of your knife cut and pull out the eye itself. If you have not noted its color do it now, also its size. Having skinned down as far as you can, cut off the body at the base of the skull, cutting into the skull in such a way as to leave a hole large enough to take out the brains of the bird. Scrape off all the flesh from the skull you can and clean off all fat and any flesh that may remain on the skin. Cover the skull with arsenic, fill the eyesockets with cotton batting and then placing both your thumbs on the skull at the spot you cut into it, firmly push it into the neck and return the skin to its right side. Cover the inside of the skin with arsenic, get it well into the legs and down into the wings and around the tail. In large birds you will need to replace the flesh you remove with clay. We can supply you with clay but you will probably find in your district clay that will mould smoothly and dry hard—add a little plaster of paris to it and it will help to harden it. See Figure 2a.

Should the neck skin get dry before you are ready to return the head to the skin a little soap and water rubbed on the neck skin will help you out. As soon as the beak appears you can pull on it to help you to return the head to its place. Be sure and pull the skin over the head as smooth as it was in life.

Note—in large birds—eagles, cranes, pelicans, swans—you will have to cut into the sole of the foot and catch the tendons in your pinchers and pull them out and push arsenic into the hole thus made.

Ostriches, Emu, etc., you will cut down on the inside of the leg and remove all flesh, replacing with clay and tow.

SPREAD WINGS.

If your bird is to be mounted with spread wings, do not break the wing bones but in skinning cut into the breast or back of the shoulder blades and disjoint. Keep bones of the wing intact.

If bones should be broken bind the broken ends firmly together, and if the bones are large enough insert a piece of wood covered with glue into the bone and bind it up.

In birds the size of Prairie chickens, hawks, owls or crows, there is considerable meat on the wings. In trying to get this out don't attempt to skin right down the wing. Spread the wing open and you will find a space very sparsely feathered on the under side of the wing. Spread the feather with the aid of your cotton soaked in gasoline and cut down this point and pull and dig out the flesh from the wing, cover it up well with arsenic and stitch up the cut with a stitch or two. Birds covered with fat, such as ducks, geese, grebes and indeed any bird that is fat try and keep in a cool place until you are ready for work. Use plenty of cornmeal to absorb the fat when skinning, try and skin it so as to leave the least possible amount of fat on the skin.

Any fat remaining on the skin MUST BE SCRAPED OFF. To do so secure and old spoon, file one side of it into teeth like a saw, sprinkle your skin with cornmeal and scrape it off. Repeat until you clear off all the fat and can see the skin. This is hard work but it is imperative. I have before me a splendid specimen of a gull, nicely mounted—the work of one of our students. He evidently neglected to skin out the wings which must have been very fat,for the grease has come through

and the feathers are actually matted and the value of the bird lessened. If you want to do honest work never leave a bird until you have cleaned off all fat.

Some birds, such as ducks, cranes, etc., you will find it impossible to pull the skin over the head. In such cases cut the skin down the back of the head and neck sufficient to allow you to pull through the piece of neck that remains when you cut it from the body. From this opening, skin off the head, cut off the remainder of the neck, remove the brains, fill out with cotton batting, replace the skull and sew up, sewing from side to side. Be sure that you have applied the arsenic to the skull and all parts of the skin. In skinning out the heads of birds as above the work will be made much easier if you bore a hole in your table large enough to hold the bill while you cut the skin on the back of the head and skin it. You have now finished lessons One to Three. Skin several birds, fill out the skins with cotton batting, slip a piece of newspaper folded into a narrow strip under and around the bird and pin it at the top and place it away as a memento of your first attempt.

Dried bird skin can be mounted but don't attempt for some time to come.

Next lesson will deal with mounting. The success of your mounting depends largely upon ability to skin a specimen well therefore practice these lessons diligently.

NOTE. Keep all blood possible off the feathers, be sure the mouth, nostrils and shot wounds are plugged up with a little absorbent cotton.

If blood should get on your bird, wash it off as soon as possible. To do this use cold soft water. Soak a piece of absorbent cotton in it and partially squeeze out the moisture. Dab or rub the feathers in the right way, every once in a while cleaning or changing your cotton. When you have got all off you can take some plaster of paris, place in a pie tin and put on the stove till the plaster is hot, spread it on the damp feathers and let it dry. When quite dry shake your bird or

sharply hit the plaster with a switch until all the plaster has come out and the feathers assume their wonted elasticity.

In cases where the blood is in small spots and it is not desirable to wash it off, apply peroxide of hydrogen with a camel's hair brush until it gradually fades away. This liquid will be found invaluable and a supply should always be on hand

Grease can be cleaned off with gasoline and an application of plaster of paris, but be sure all the grease is out of the feathers before you apply the plaster or you will wish you had never heard the word Taxidermy.

CANADIAN SCHOOL

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LESSONS 4—10

How To Mount Birds

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WIRE GUIDE. Higher number denotes small wire.

20—19	Sparrow, Bluebird
18—16	Kildeer pigeon.
15—14	Crow, Prairie chicken.
13—12	Pigeon Hawk, Mallard.
12—10	Arctic Owl, Large Hawks.
10—8	Goose, Eagle.
8—6	Pelican, Whopping Crane, etc.

EYE LIST.

1—2	Humming Bird, etc.
2—4	Sparrow, etc.
4—7	Blackbird, Robin.
7—9	Prairie chicken, Teal.
9—12	Goose, Grebe, Hawk.
12—15	Screech Owl, Eagle.
16—19	Eagle, Pelican, Arctic Owl.

LESSONS 4—10

You have practiced your former lessons and have attained some proficiency in skinning and are now ready to turn your attention to learning how to mount your birds.

Before proceeding you do well to place in a handy place excelsior, tow, some clay, hat-pins, long and short, a ball of twine, arsenic and wire. The matter of wire is all important. Too large a wire will make your birds' legs bulgy if it does not break the skin, and too light a wire will make it flimsy By reference to the wire table you can easily discover the kind of wire needed for each bird.

We presume you are to mount a crow. Cut two wires four or five inches longer that the length of the entire leg, measuring from the top of the thigh bone to the sole of the foot. Sharpen one end of each of these wires. These are leg wires.

Cut another wire the length of the bird from tip of bill to end of tail. Sharpen both ends of this wire.

Now you are ready to make a body. Secure a small piece of excelsior, roll it into a ball, and wind it tightly with twine or stout thread, gradually adding more excelsior here and there until you have a body about the same size as the original, only a trifle smaller. When completed it will be much the shape of an egg. The smaller end being the tail. Keep your original body until you have your dummy made. See cut 1, 2, 3.

Body making will trouble you a little but after one or two attempts you will be able to make a tolerable good body. Re-

member it must be smooth firm and smaller than the original and look like it in shape. If you are carefui when you put your skin on the dummy it wi. . so snugly you will hardly need to wind the feathers down at all. Don't forget that perseverance is the secret of success.

You have your dummy before you. Your next step is to attach the neck. Take a look at the carcass and note if the neck is straight with the back (see Plate 1-2) or curves into the shoulders, and insert your wire into the centre of the dummy and drive it through to the tail, bend into a hook and pull it tight into the body. Wind some tow, cotton or excelsior around the wire for a neck, making it a little shorter and smaller than that attached to the carcass. Be sure that your neck is attached firmly amd smoothly to the body.

Now take your bird skin. Be sure you have covered it with arsenic. Taking your artificial body, insert the artificial neck with the projecting sharpened wire into the neck of the skin, work the sharp point down into the brain cavity and out through the skull, work the skin down over your artificial neck until it fits snugly.

Take your leg wire, holding the leg in your hand, pierce the sole of the bird's foot with the wire, which should be previously oiled, and drive the wire up the back of the leg taking care not to pierce the leg skin. You may have a little trouble getting it up the back of the knee but you can get it through with a little effort. Turn back the skin to expose the leg bone, at the knee and you can drive the wire through. Push it through until you have enough to go through your artificial body, allowing sufficient for clenching. Tie the leg bone to the wire and wrap some tow or excelsior around the upper part of it to take the place of the flesh taken off. Make it smaller or you will not be able to get the leg skin over it.

Draw back your wire through the leg until but a ½ inch projects at the end of bone. Now place your artificial leg with its sharp wire against the side of your bird, about the middle of the side and nearer the back than the breast, drive the wire

right through the body by pushing it through the leg and into the body. When it projects enough to bend into a hook, bend, and pull the hook tightly into the body. Do the same with the other leg. The bending of the wire firmly anchors the leg wires. Shove your legs down until they rest against the side of the body and parallel with it Be sure its feet have toes to the front. Now pull the skin up over and around the body, placing the tail in the position and pinning it there with a hat pin. Study Plate 7.

Thread a needle with some thread and commencing at the breast sew from side to side drawing the skin together and picking out the feathers. Do not sew them down. If your breast is not full enough or too flat shove some cotton under the skin. Put a little in at a time until you have the desired fullness. Sew down to the tail, catch the tail skin with a few stitches and then cut your thread so as to leave a few inches to spare. It is handy to locate the stitches if you should need to open it up again to add or take away some of the stuffing you inserted. Smooth down the feathers on the breast. You can do this by lifting them the wrong way with a hat pin and letting them fall back into place and then smooth them lightly down.

The next step is to get your specimen on the board or perch. Take a board or a T perch and bore two holes through it. If bird is standing holes will be side by side, if walking, one some what in advance of the other. (See Fig. 4.) Determine the distance the feet should be apart and the length of step if you are to mount your specimen walking. Through these holes run the wire projecting through the bird's feet, put the toes in the proper position, pull tight and clinch the wire by bending it sharply under the board, twisting around your perch or together.

Your bird is now standing neck straight out and wings down You must now proceed to shape it. If you can have a bird in the flesh before you like the one you are mounting it will be a great help.

Take hold of your bird at the knees and bend your wire backward at the joint to put the legs into natural position.

Push a hat pin through the shoulder of the wing. Move the wing up and down until you determine its proper place. Don't have it too far forward, too high or too low. The shoulder of the wing in most birds is covered smoothly by the breast feathers. Having got what you think is the right place drive the pin into the body. Put several more pins through to keep it in place. If it does not suit you unpin it and try again. Having placed one wing place the other to correspond, be sure they are level, same distance forward and same height. The tips of the long feathers (primaries) should meet even at the tail.

You will now turn to the head and neck. If you have made the neck a trifle shorter than the original you can move the head up or down until you have the right position. Open the bill and push in some chopped tow or cotton until you have it right size and shape. Don'toverstuff. A bent wire will greatly assist you in placing the stuffing as far down as the shoulders and filling the neck and throat successfully. When you have put in sufficient take a needle and thread, run it through the nostrils, wind the thread around the bill and tie. This will keep the mouth closed. A pin shoved from the lower mandible slantingly into the upper will do equally as well.

Now bend the head and neck into a natural position. Don't be afraid to handle your bird. It will stand a lot of it. Having shaped it the best you can, stick several pins down the centre of the back, attach a string to one of them and run it backward and forward to the pins in the wings until the plumage is wound down smoothly. You can wind it clear around the body if necessary. (See Fig. 8.) Another good plan is to make a band of paper of varying width and wrap it around the body and hold in place by a pin through it into the back of the bird.

If you haven't placed your glass eyes you can do so now. Push back the cotton or pull some of it out of the eye cavity and replace by small pieces of clay. When you have enough in and have it smoothly placed, push in your glass eye, and, with a needle pick out the eyelid and press it close to the glass eye. The lifelikeness of your bird willdepend largely on your eye. Keep both eyes even, do not have one up and the other down, don't get them cross-eyed and be sure they are the same color.

If you have not the eyes handy, pluck out the cotton a little to keep the eyesocket full.

The eye can be just as perfectly placed months after as now. Some taxidermists put in the eyes before they return the skin over the head, but there is no hard and fast rule. To place an eye in a dried specimen pull out the cotton and insert some that has been soaked in warm water adding a drop of water now and again until the eyelid is soft and easy to work. Then push in clay or putty and place the eye, drawing the skin nicely about it. In some cases you may find it necessary to place a stitch in the corner of the eye to contract the eyelids if they have been stretched.

After you have placed in the eye or decided you will not do so for the present your bird is done and you will need to place it away to dry which will take from one to two or three weeks according to size.

When dry cut off the projecting wires and pins. Draw out with a slight twisting motion all pins not needed. Unwind the twine and with a feather duster dust off all dust and arsenic. Should you find a feather that will not stay down, touch it lightly with turpentine and it will be good.

Unbend the wires under your setting block and having bored holes in your permanent block take it off the temporary one and place it on your permanent mount and clinch the wires securely underneath. If any parts of the bill or legs have faded restore it to the original color with oil paints. Your bird is now done and while you may be disappointed remember it is your first. You will meet with discouragement, but persevere.

By the time you have done two or three birds you will be surprised at your success.

PELICANS, SWANS, CRANES, ETC.

Skin the same as other birds. In skinning a white bird, or a bird with delicate plumage such as pheasants, etc., sew paper or white cotton to the sides of the skin on the breast-cut to protect the feathers while you work and use plenty of absorbent such as cornmeal to take up the grease.

Be sure and cut open the soles of the feet on all large birds and with a hook catch the sinews of the leg and pull them out. Crowd arsenic into the vacancy. Don't forget to pull out the sinews. It will save you no end of trouble when you come to insert the leg wires, particularly in the crane family.

For birds with long necks use two wires, three if necessary. Make the neck on one wire and the neck on another and bind both together. Have them both solidly anchored in the body. Let one wire go through the skull and the other come about three-fourths of the way down the inside of the bill. Glue the bill of large birds together thus hermetically sealing them against insects.

BIRDS WITH SPREAD WINGS.

(Study Fig. 6.)

You will do well not to attempt any fancy attitudes until you can mount a bird standing or walking fairly well.

To mount a bird with spread wings, do not break the wing bones. Locate when skinning the joint at the breast, we will call it the shoulder, and dissect it and skin as previously the remainder of the bird.

Be sure and clean off all flesh from the wing bones. Don't separate the bones and do not loosen the feathers that are attached to them. Simply take off all the flesh you can. Don't forget the incision under the wing for the skinning out of the 2nd and 3rd sections—as outlined in Lessons 1—3.

Having skinned out the wing and dusted it with arsenic, take your wire (size 8-10 for eagles) and cut it long enough to

go through the entire wing and body and project seven or eight inches on the other side.

Commence at the tip of the wing and with the sharpened point run the wire along the wing bones past the joints into and through the body. Bend the projecting wire into a hook and pull it tight into the body. (See Fig. 6.) Do the same with the other wing. Slide the wings down the wire until the end of the bones lie snugly against the excelsior. If you make an indentation in the excelsior for the round knot of the wing bone it will be better, but it is not necessary if you cut the end of the bone off. Bind the bone of the wing firmly to the wire. Sew up the breast incision and place on your mount. Bend the legs into position. Fill the neck and throat as detailed in mounting with closed wings.

Bend the wings into position. They will likely refuse to stay up properly so run a stout wire under the entire length of the wing and right into the body in such a position as to help support the wing. If it is not fairly firm now run another wire from the block straight up to the wing wire at the tip or a light piece of wood will do and lightly attach it to the wing wire. Anything is permissible to help hold the wing up until dry when they will retain their position without supports. The supporting wire can easily be withdrawn by a twisting motion from the body.

Strips of cardboard an inch wide placed above and below the wing feathers and held by pushing a pin through will keep the feathers of the wing in place

Watch the process of drying carefully and if it should get awry use more wire or more cardboard strips to keep it in its place.

When quite dry clip off all necessary wires close to the body, repaint any faded parts and your bird is done.

We recommend for large birds that you place then upon a permanent mount at once as they are very awkward things to transfer and it will save you considerable time and worry.

MOUNTING DRY BIRD SKINS.

This work should not be attempted until you have mounted successfully green bird skins. Good work can be done on dry skins. Patience and perseverance are the keywords of success.

To begin—procure a tight box and fit it with a lid that fits snugly. The box should be large enough so that you should not need to bend the skin. Put in 3 or 4 inches of wet sand. Take your dried skin and with your forceps remove the cotton or tow with which it is stuffed. replace with damp cotton. Take the cotton out of the eyesockets and put in damp cotton A little carbolic acid in the water is necessary in hot weather. Wrap the feet and legs in cotton batting soaked in this solution. Place your specimen in the box and close the lid down.

Sparrows can be mounted in 23 hours of this treatment, but large birds will require additional dampening and moistening Birds like large cranes will likely not be in shape to mount for a week. When legs are soft enough to wire proceed in the regular way to mount.

Birds with long necks be sure and stretch the neck skin with your forceps. In fact, you can stretch all skins safely.

Before winding the plumage down with thread hold the specimen in the steam of a tea kettle and thoroughly steam it.

Note in all birds, color of eyes, feet, bill and pouch. When faded repaint with oil colors.

(2) In mounting grebes, comorants, loons, notice that the legs are near the tail, not in the centre of the body and place them accordingly.

(3) In mounting cranes and other birds walking with foot just leaving the ground, run your wire out through the toe, either by cutting on the under side of the toe and binding the skin around the wire or by starting to run your leg wire from the base of the toe nail instead of the heel of the bird.

(4) Don't attempt fancy attitudes at first, plug away at regular work until you are competent. It will pay you a hundred fold.

(5) Keep the arsenic out of cuts in your hands and off your face.

(6) Clip out of magazines, etc., pictures of birds, animals, etc., and file away for reference. They will be very valuable in helping you to strike good attitudes for your mounts.

PRESERVATIVES.

1—Arsenic, 1oz., Alum, 1oz., this is better than straight arsenic.

2—Arsenical Soap. Dissolve 1lb Royal Crown Soap in 1 qt. of water. Add 3 lbs arsenic, 1 oz. Corrosive Sublimate. Melt 2 ozs. camphor and pour on the above. Stir all together and place away to cool. To use dip brush in some water, work up a lather and apply to the skin. It is particularly useful for large bird skins and hides for mounting. You should not be without it.

CANADIAN SCHOOL

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LESSONS 11—15

How to Mount Small Animals

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LESSONS 11—14

The following tools should be on your work table. A good sharp knife, (An ordinary pocket knife with one large blade and one small is an excellent tool), a clothe· pin, some wire of the right size (see wire table) a file and a small augur.

For Preservative you will use Arsenic and Alum mixed in equal quantities, or Pickle bath described.

TABLE OF WIRES.

16—18—Gopher, Squirrel, etc.
13—15—Muskrat, etc.
11—12—Jackrabbitt, etc.
9—10—Badger, Foxes, etc.
7—8—Wolf, Coyote, etc.

¼ inch round iron rods, Timber wolf, Pointer, etc.
⅜ or ½ inch round rods—Antelope, Bear, Elk, etc.

Never use a light rod or wire, you will very soon be able to pick your wire without reference to table.

TABLE OF EYE SIZES.

2—Field mouse, etc.
5—6—Striped gopher, Chipmunk.
7—8—Skunk, Muskrat.
8—9—Ground Squirrel.
9—10—Squirrel, Kit Fox.
11—12—Badger.
13—14—Jack-rabbit
15—18—Bears, Lynx, Timber wolf, etc.
19—24—Mountain lion, Deer, Goat,
25—27—Elk, Moose Caribou. 11.-12.

These lessons well deal with the animals you will in all probability attempt to mount first, such as, gophers, squirrels, rabbits, weasels, foxes, coyotes. For animals the size of a fox and larger take the following measurements:

(1) Length from tip of nose to end of tail.

(2) Length of tait.

(3) Length of hind foot fromextreme toe nail to end of heel when planted firmly on the ground.

(4) Heights of shoulder from ground.

Note color of eyes, lips, etc. and write down any other item that you may deem necessary.

It is a good plan with the larger animals to lay them on a large piece of paper and with a pencil or chalk sketch their outline by running the chalk around tht body. You can thus get a perfect outline of the animal running, walking or standing that will be of great value to you.

How to skin:—Lay the animal on its back, head to your right. With the edge of your knife upward, shove the point under the skin in the centre of the neck and push the knife forward under the skin, making a straight cut from the neck to the tail. If the animal you are mounting is a fox, dog, or has a large tail, continue your cut to within a few inches of the end of the tail. Be sure and make the cut on the under side of the tail and do not cut the hair. If it is a gopher or squirrel it is not necessary to cut the tail but slip your clothespin or two flat pieces of wood around the tail, hold and pull on the tail bone and it will easily slip out of the skin.

Make a cut on the sole of each foot from the middle toe to the heel and in larger animals cut up the back of the leg about a third of the way to the knee. It is almost impossible to skin the leg unless you do this.

Now you have all the opening cuts: (1) From the neck down breast and stomach to tail. (2) If large animals you slit the tail. (3) The cut on the sole of the foot (you can omit this in gophers, etc.) and (4) up the leg in large animals, e.g. foxes, etc.

Now catch the edge of the skin over the abdomen and with your knife cut the tissues that hold the skin to the body. Cut as close to the skin as you can so as to leave all possible fat on the body. You need not go at it as though afraid you will hurt it. Cut rapidly but carefully and you will soon become so expert that you will be surprised at your deftness. A clean, shaving stroke of the knife is the one you need to cultivate.

You have not been skinning the abdomen long before you come to where the fore leg joins the shoulder and to the hip of the hind leg. Cut through the joint severing all the flesh and muscles until the leg is freed from the body. Skin each leg right down to the toes. This can be facilitated by tying a string around the bone of the severed portion and hanging the body up thus helping to pull the skin wrong side out over the foot. When you have separated the leg skin from the flesh cut off all the flesh from the leg bones and foot. Do the same with all the legs in turn. Don't separate the bones and never throw away the leg bones unless you are making a rug out of the skin. Now skin tail as already described.

Separate the skin from the back, shoulders and neck. When you come to the ears cut themoff close to the skull. Your skin will be wrong side out. Be sure and go easy now. You are coming to the eyes. Cut slowly and lightly. Keep close to the edge of the eye socket until you see the eyeball through the thin skin. Cut through this. It is a good plan to put your finger into the eye from without and cut against it. We always do this with large animals.

Skin down from the eyes to the nose. In small animals such as mice, moles and small squir-rels, you can leave the skin attached at the nose and lips. In others when you get to the end of the nose cut through the gristle close to the bone. Cut on until you come to where the upper lip joins the gum. Cut both lips away from the skull. To do this cut close to the bone all the way around. As the lips are thick slit them on the inside and pare and scrape away the flesh to the skin. Nev-

er cut away the inside skin as it is necessary in help making the lip of the animal again. Don't cut the roots of the whiskers, simply make slits between them for the preservative to get in Clear out all flesh from the eyelids and from the ears. If the ears have hair upon them they must be skinned from the inside and turned wrong side out to the tip, in order to separate the skin from the cartilage. A description of this method will be given on Skinning Game Heads.

Scrape off all fat from the skin. Wash off any blood that may be on the fur with luke warm water. If you are away from home you may preserve the skin the following way. Cover the flesh side with salt, rubbing it well in and letting skin dry in the shade. However, we presume you are in the workshop. If the animal is small, e.g., a gopher or squirrel, you simply dust it over with arsenic or arsenical soap. Rabbits must always be treated with the above presernative. All other skins can be placed in a pickle bath and left there till needed. This bath is very useful and has no limit to its preserving powers. I have had Elk and wolf skins in it for over a vear and they have kept perfectly. Make the bath in a galvanized vessel if possible as in a wood-en vessel it loses some of its strength by evaporation.

PICKLE BATH.

1 gallon water. $\frac{3}{4}$lbs Alum. 1oz. Corrosive Sublimate and all the salt the mixture will take up. Heat the mixture till it boils stirring frequently. If many crystals form on the fur there is too much alum in it. Add more water. Always have plenty of salt in the bath. Put in your hides and change them occasionally so that all parts will be reached by the solution. If the bath gets greasy or dirty make a new one.

Should the hair start to slip on your skin, heat sufficient of the pickle till it is so hot you can just nicely put your hand into it. Take it off the stove and plunge your skin into it. The pickle at once acts as an astringent to the skin and arrests the falling hair.

MOUNTING SMALL ANIMALS. METHOD NO. 1. MICE

We presume you have your skin ready to mount. If it is fresh, cover it liberally with powdered alum in addition to arsenical soap. Alum and arsenic in equal parts can be used if arsenical soap is not available but in this case it is wise to moisten the flesh side of the skin before applying. Get the poison into every part of the skin. If there are any holes in the skin sew them up from the inside.

Wires:- We presume you are mounting a squirrel. Use size 15 wire. For the hind legs measure from the top of the thigh bone to the heel and add nine inches. Do the same for the fore legs. For the backbone measure from the back of the head to the tip of the tail and multiply by 2.

Cut another the length of the tail plus enough to reach to the centre of the back. Clean off all rust and oil each wire. Sharpen one end of each.

We will now proceed to make the legs. Insert the sharpened end into the slit in the sole and push it up behind the bones of the legs, leaving three inches projecting below the foot. Bend the wire to fit the angle of the bones and bind it to them with stout thread. Take some tow and bind it on the bones to replace the flesh. Notice there is little flesh on the ankle and that the leg is flat on the inside and round on the front. On the calf of forearm note the flesh lies behind the bones. The thigh is flat on the inside and round on the outside. It is a good idea to take a tracing of the leg in the flesh before you clean it off the bones. To make the flattened thigh roll some tow first around the bone then roll up a piece about the size of your forefinger and bind it alongside.

By doing this several times you can get the proper thickness and width. If you have a tracing you can easily check up the width of the legs and get them correct. Make the legs a trifle smaller than original. Animals that are thin-haired will need a heel tendon. To do this make a hole through the heelbone and insert a small wire for half its length then twist the wires together halfway up to the knee. Wind tow around this wire putting it on a little heavier as you near the knee. When the tendon is complete bind it into the thigh. In animals like the squirrel possessing long heavy hair this will not be necessary. When the leg is finished and the skin thoroughly poisoned cover the tow leg lightly with soap and pull

the skin over it into its place. In like manner make all the legs. Place clay in the sole of the foot, bend it at right angle and sew up the cut. For the tail bind tow evenly and smoothly on your tail wire, cover it with soap and slip into place. Sew it up if you had to split it. Don't make it too large.

Now take your backbone wire Make a hole in the base of the skull above the opening and drive the wire down the nose bone and out of the nostril. Replace the flesh and muscles of the jaws with clay and fill the eye sockets likewise. Cover the skin with arsenical soap if you have not done so and replace over the skull. See that the eye is over the centre of the eye socket. Take a pin or a tack and drive it through the skin into the bone over each eye. Drive another tack into the centre of the skull.

No proceed to wire up. (See Cut I.) Take the two foreleg wires, bend them from the end of the bone in an obtuse angle and where they cross each other as they lie on the back bone wire turn a little ring in the latter and run both wires through it, the right leg wire being on top. Between five and six inches from the skull will be the place for the ring but your eye will have to guide you largely Measure the space between the extremity of the toes and allow the same from the end of the bone to the back wire. This will be the width of the shoulder Bind these two wires firmly around the back wire until they are solid. Six inches below the first ring twist another ring and bending the wires of the hind legs slightly forward slip them through this ring. Determine the right distance apart and bind them firmly about the back wire. Now take the free end of the body wire and bend it sharply toward the head and twist it around the others and along the back wire. Put the tail wire between the hind legs twist it around the back wire and tie it fast. Wrap tow around the wires to cover all uneven points.

Now chop up some tow and with your pinchers place it all over the inside of the skin. You can put it on quite thickly particularly at the shoulders, hips and along the back.

You can now give the animal the position you desire. By means of the space between the shoulder and ring you can move the leg up or down and you have all under your control.

One of the most natural positions for a squirrel is that of sitting on its haunches eating a nut. To mount thus bend each hind leg at the knee until the thigh rests upon the calf of the

leg. Bend the ankle until the foot forms an acute angle with the calf. Curve the back bone in such a manner as to throw the body forward between the knees. Push up the hind legs in to the body thus making the squirrel sit on its tail.

Press the elbows down at almost a right angle with the arm until they almost touch the knees. Curving the back will help you to do this. Bend the backbone slightly below the shoulder to bring the head and shoulders into place. Twist the head to one side into the position you desire.

Proceed to fill the body, filling around the backbone first, then the shoulders, then the neck. Go from one spot to the other filling all alike. Finish the neck first and sew up to the front legs, leaving the thread hanging. Fill up as you sew. Don't let your tow get into lumps. If one part of the animal seems to be short of skin stuff out that part first and you can soon draw skin to that section. The secret of success lies in filling all parts together and keeping all parts symmetrical.

Now with needle and thread begin at the tail and sew carefully (not catching the hair) for about two inches. Now bore your holes in your mount according to the attitude you desire and run the leg wires into them and see what he looks like. If it is not satisfactory take it off, move the legs, stuffing, or whatever seems necessary. Maybe your holes are too far apart or too near.Through the opening yet left unsewn you can easily get at all parts and rectify any mistakes. When you have it correct sew up all the openings, comb out all the tow adhering to the fur, and if dirty wash it with washing soda, soap and water till clean,then place your squirrel on the board and bend the wires underneath. If it is too wide over the shoulders pinch them up. If too round in the body flatten by pressing the sides.

To finish the head cut off the wire through the nostril close to the skin. If the cheeks, lips and nose are not properly filled out push in some clay and press into shape. If necessary pin the lips into position. Place the eyes in position and draw the eyelids around them neatly,inserting clay for a bed for them if necessary. Prick out the ears of rabbits, foxes, etc. Cut two pieces of cardboard in triangular shape, curve them slightly and either pin or stitch the ears to them. This will hold the ears in position. We are going to put a nut into the squirrel's paws. First cut off all but a half inch of wire from the forepaws. Drill a hole in both sides of the nut, slip

the wires into it, pinch the jaws together slightly. Place the tail in proper position. Restore any faded parts with paint and your work is done. Never place animals with fur like rabbits in the pickle.

We believe this to be the best method of mounting. However some may prefer METHOD No. 2, which is as follows:

Make a body the same as the original out of excelsior by winding and sewing. Form legs and wire them as outlined in Method No. 1. Run a sharpened wire into the skull and down to the nose and clinch it there. This wire must be long enough to go right through the length of the body. Run it through the body pulling the skull tight up against the artificial body and clinch at the rump. Clinchthe leg wires through the body and finally the tail wire and then sew up and shape the body into position.

Whilst we recommend the first method, good work can be done with either. Adopt one and stay with it.

CANADIAN SCHOOL

OF

TAXIDERMY

CORRESPONDENCE COURSE

LESSONS 16–20

How to Mount Larger Animals

PREPARED BY THE

REV. P. IVESON THACKER

FOR EXCLUSIVE USE OF THE

CANADIAN SCHOOL, REGINA, SASK.

ROULEAU, SASK.:
THE ENTERPRISE PRINT

LESSONS 16-20

MOUNTING LARGER ANIMALS--WOLVES, BEARS, GREYHOUND, ETC.

CENTRE BOARD SYSTEM.

Measurements :

1. Length of head and body from tip of nose to foot of tail.
2. Height from shoulder to bottom of heel. A-E
3. Girth behind forleg. N-N.
4. Around the neck. A-A.
5. Depth of flank. C-E.
6. Around the forearm. N-N.
7. Point of shoulder humerus to thigh bone (femur). O-O.
8. Length of tail. I-I- (See Fig. 1).:

It is permissible to take any other measurements that you may think useful. If you can draw, sketch the outline of the back, neck, breast, legs, etc. If you have a camera, photograph your animal in various positions. All these things are valuable in many ways, as you will frequently discover.

SKINNING.

Follow the same general directions as in previous lessons (XI-XV.) We presume you are mounting a wolf. 1st. Cut from the throat to the anus. 2nd. From the foot and on the inside of the leg slit down to No. 1 cut Do the same with the other legs. (Now proceed to flay off the skin in the usual manner.) Hang up the body with a hook and chain to facilitate matters. 3rd. Sever the tail from the body with a saw. 4th. Cut out the legs at the body joints. Turn the skin over the head and flay as described in skinning small animals (lesson xi-xv.)

Clean all the meat from theleg bones and feet, scrape fat and flesh from the hide and put into the pickle bath already described (lessons xi.-xv.)

Cut all the flesh you can from the head, take out the brains by enlarging the occipital opening in the skull. The best way is to boil the head until the flesh drops off. Scrape it clean—dry in the oven or in the sun. It must be bone dry and clean.

MOUNTING.

Take the skin from the bath, thoroughly wash it in clean water and hang it up to drain. Wipe it with cloths, rubbing the hair the wrong way, and comb out the hair with a metal comb.

Secure a sound piece of pine 2 inches thick and about 4 inches wide, and of a length about equal the distance from the shoulder to the rump. Round the corners and the ends. (See Fig 2.) Now wire and shape the artificial legs. Then place in the skin the board you have just made (note where the leg irons cross.) Bore holes, slantingly through the stick for the irons to pass through. Run the irons through, adjust the legs so you have lots of loose skin in the body. Keep the stick in the centre of the body. When you are satisfied the legs are as near right as you can get them bend the wires down to the stick and by means of staples secure them.

Pass one of your neck-irons into the skull. You can bend the end into a crook and run it into the brain-cavity and fill the brain cavity with plaster of paris. When it sets the iron will be solid. Otherwise bore a hole in the skull so that you can run your iron through it and out at the nasal cavity. Replace all missing flesh with excelsior and clay—bind excelsior on first, then cover with clay. Place the modelled skull into the head skin and fasten the neck-iron securely to the board. Make your tail, insert it, but for the present simply hold it in place with staples so loosely driven that you can slide the tail wire backward and forward on them.

Bend the legs into position, and strike the attitude you desire for the animal. Make the necessary holes in your mounting board or branch to correspond with the leg irons.

Now take off the skin, cover it all over with a coating of arsenical soap—cover it thoroughly, then replace it and proceed to stuff itf Chopped tow, excelsior or soft straw can be utilized for this (tow and straw being the best.)

Begin at the neck. Fill it, driving the stuffing in with a crammer. These useful implements you can easily make by taking round irons of various sizes, heating one end, and hammer-

ing it into chisel shape. Drive the stuffing in with the flattened end—watch the body. If you think any part is going to be too small at once fill it out. Don't stay with one part, but work all over the body as much as possible at the same time. At this stage staple the tail-wires securely.

You have it now fairly wellfilled. Sew it up, leaving holes between the fore leg and under the tail. Now fix it on the mount permanently.

You will at once notice defects. Perhaps it is not full enough, or too full in many places, or the line of the back is down, or the abdomen looks stuffed. You must rectify this. Through the holes left in the skin push your metal crammers moving the stuffing or shoving in more where necessary until you have it correct. You can control all parts of the body from these two openings. When you have finished sew up the openings. Be careful not to sew in the hair, and it is to be hoped you have been careful not to pull it off while shoving in your filling.

The manner of finishing heads will be described in another lesson.

MANIKIN MAKING.

This is another way of mounting animals. By this system you build up a complete body. First select a back bone of wood about two-thirds the depth of the animal. Take your leg irons, make threads at each end of them. Now take a piece of flat iron, ¼ inch thick, 1½ inches wide, 9 inches long, 3½ inches from one end bend each iron at a right angle. You will have to heat it to do this. Heat the short end red hot. Clamp this in the vise and make a twist of exactly a quarter of a turn in it as close to the angles as you can. (Fig. 3.) Drill holes as shown to take the leg wires. Put on each pair with a single square-headed bolt which will vary, of course, with the thickness of your board. These squares are of exceeding value as by screwing on the leg-wires up or down you can lengthen or shorten the legs. Be sure, however, and do not get the short iron arm too long. When you have everything right, tighten up all screws and bolts and build up your animal. Then put on the skin and sew it up.

MOUNTING ELK, MOOSE, AND ALL LARGE ANIMALS. SCULPTURE METHOD.

Unless you are going into the business professionally you will not likely be called upon to make manikins or to resort to this method, but we detail it here for your knowledge. One needs to mount several whole animals before you can do good work. The sculpture method is the last word in Taxidermy. We are the only school that teaches it. It is used today in all the greatest museums of the world.

It demands a wide study of natural history and photographs of the animal in its natural haunts. Animals are skinned in the same way. Leg bones are separated at the hoof but kept, also the shoulder blades, the pelvis and the skull. Careful measurements are also made directly after death. Length from tail to brisket, from femur to humerous, and depth from backbone to belly.

A rough beam representing the back bone is shaped from measurements and photographs. The bones are attached to this by wires, bolts, nails and screws, and when properly placed fill in the body with wooden ribs and cover it with chunks of clay. It is now shaped and moulded, muscle after muscle being brought out until at last the animal is complete. The skin is tried on and if everything is satisfactory we are ready to proceed. You will notice that the clay manikin is not permanent. We have to support it with a plank beneath attached to backbone and modelling stand.

The iron rods in the leg bones are merely to fix the bones into the position desired. To mount on this would be to produce a heavy unwieldy and perishable piece of work.

We will, therefore, proceed to get a cast of the clay manikin.

To get the first mould which is but a shell place handy large pieces of burlap and a tub of mushy plaster freshly mixed. Dip the burlap into the mushy plaster till it is soaked and apply it like a blanket all over the clay model, sewing it together except at what are called the division lines. These are so arranged as to give us a shell mould without any re-entrant angles. One then will run the the back and neck and also down on both sides of all four legs. It separates at the root of the tail, going to each leg, and the same at the base of the throat going to each foreleg.

Thus we have three moulds. One of each side of the body

and one of the belly and inside halves of all four legs. Sometimes it is easier to form other parting lines—crossing at the brisket and belly, thus giving us five parts to our mould. The last being the little triangle which takes the base of the throat and breast down to the brisket line. After it is all on we smooth it over with wet plaster and let it dry.

It is then stripped off the clay form. We now shellac the moulds and thoroughly oil or grease them. Then some more burlap soaked in plaster is pressed into the moulds, allowed to dry, and then stripped out. A gas pipe frame work for the body is made. The pieces of burlap now thoroughly dried hard are assembled and tied to the frame, much of the work being done through the triangular section of the breast. When all is securely tied inside, the breast is hooked into the inside. It is then smoothed up and shellaced and is now ready for the skin. Smaller animals can be mounted in this manner, but the worker is cramped for room. It is a good idea to mount one or two this way and master the principles involved. We do not recommend you to undertake this class of work unless you are going into the business. The illustrations will give you a good idea of the method.

CANADIAN SCHOOL

OF

TAXIDERMY

CORRESPONDENCE COURSE

LESSONS 21–26

How to Mount Game Heads

PREPARED BY THE

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FOR EXCLUSIVE USE OF THE

CANADIAN SCHOOL, REGINA, SASK.

ROULEAU, SASK.:
THE ENTERPRISE PRINT

LESSONS 21-26

MOUNTING GAME HEADS—I. ELK, MOOSE, BUFFALO, ETC. II. BEAR, LYNX, WOLF, TIGER, ETC. SKINNING.

One of the primary requisites for a good head is length of neck skin. It should be cut close up to the shoulders. Many a fine set of antlers is spoilt by being cut on a short stubby neck. Having cut the skin entirely round the neck close up to the shoulders begin at the back of the neck, (never cut down the throat as in animals) and make a clean cut to a point between the antlers or horns, from this run a cut across to each horn at right angles—the cut will look like this ⊣ Now start at the base of the neck and flay off the skin. When you reach the ears cut them off close to the skull. Be very careful around the eye. Shove your thumb into the eye socket and cut against it. You will notice in elk an indentation just below the eye, the skin runs away in here and is attached to the bone. Separate it carefully. Your skin is now wrongside out and falls over the nose. Continue to skin until you reach the lip and nose. Skin down as far as possible, then cut through the gristle of the nose, but not through the nostrils, to the roof bone of the upper jaw. Sever the lips and nose from it and cut the under lip loose, also close to the bone. Now your skin is off. Throw it over a beam and with a sharp knife or a draw knife scrape off all the superfluous flesh you can. Your draw knife should not be very sharp. Clean out all the gristle from the nose you can, but do not cut the dark skin of the nostrils. Slit the lips close to where you separated them from the bone and cut out all the flesh you can. By patience you can clean out the lips and nose very nicely.

Now tackle the ears. Some taxidermists simply cut off all

the cartilage possible and sew a piece of cardboard on the ear, but if you would have natural ears and not wrinkled, twisted and distorted ones, the cartilage of the ears must be removed. You will find it hard work, but do it. Play the game, it will pay you in the end. "Begin atthe base of the ear, separate the skin from the cartilage by cutting, pulling and pushing the two apart. Stop at the edge of the ear, gradually turning it wrong side out until you reach the tip. Fig. 1, 2, 3, 3. The ear is now wrong side out, the skin separated from the back but still adhering to the inside. Now begin at the tip and peel down gradually, separating the skin from the cartilage until it is quite free, down to the base of the ear, so far within that when the skin is cut straight across and turned right side out again the point of detachment cannot be seen."—(Hornaday). Place your skin in the pickle bath already described. Put in the cartilage of the ear also. It will be invaluable in making the model for the ears.

MOUNTING.

Clean off the skull. Enlarge the occipital opening and remove the brains. If possible boil the head until all the flesh is off. Thoroughly dry it. With a chisel and hammer enlarge the occipital opening to take the end of a 2x4 scantling for elk and moose and proportionately smaller for deer or antelope. Cut a base board the size and shape of the neck. If you have no neck in the flesh to work from and no measurements fold the skin together, catch it with a stitch or two at the beginning of the cut in the neck. Stretch it out into shape, propping it open with sticks and roughly measure length and breadth. Cut shield to correspond. Measure from ears to the end of the neck for length of neck. Take your 2x4 scantling and fit it into the enlarged opening at right angles to the skull. Drive heavy nails through the skull into the scantling. Stand the head on its horns, place the lower jaw into position and secure it by wiring. Fill up the cavity around the scantling and joints of the jaw bone with plaster of paris mixed to the consistency of thick cream and leave to harden. When quite hard secure some one to hold the head up against the wall to get the right angle and position. Mark and saw your scantling, now put on your base board with heavy screws. Hang up the head by the base board and it will be easier to work with. Bind on excelsior to the neck board until you have a neck firmly wound and a trifle smaller than the original. Take the head skin from the pickle

and wash it in several changes of water, let it drain for awhile, then throw it over a beam and with your currier's knife pare it as thin as possible. This work will limber up and stretch the skin. Try it on your artificial neck from time to time. When you have the neck the right size coat it over with clay and smooth it down. This method is far ahead of the old one of putting on the skin, tacking the neck to the base board in four places, screwing down the back and ramming in excelsior through the opening until the neck is full and then tacking the skin all around the board.

You will now proceed to model over the skull with clay, replacing the flesh you have removed. You can work with plaster of paris if you wish instead of clay. Wherever you can bind on pieces of excelsior and cover it with clay or plaster do so, but be sure your modelling is smooth when finished. In modelling the nose run some wires up into the nostril cavity to help hold the clay. Be sure and do not make the nose too long, better make it short, as you can fill it from the nostrils when it is placed on the model.

Your modelling done, wash out your skin again, press out the water by running over it with your currier's knife. Again, slip it over the nose of the model and pull it into position. If it fits alright we are ready to proceed. If it is too tight slip it off and pare down your modelling until it slips on fairly easy. Before putting it on for the last time we will model the ears.

Take the cartilage of the ear from the pickle bath, cut a piece of tin the same size, cover it with a coating of clay, place it in the ear sheath and mould the ear neatly upon it. Do the same with the other ear. You are now ready to place the skin permanently upon your model. Pull it on your model, taking care it is on evenly and properly.

Now take some wire nails of suitable size, tack the neck skin into place on the base board in 4 or 5 places, then with a stout thread heavily waxed begin at the top of the head and sew the cuts together. Next pull the skin close up to the burr of each horn and with fine brads tack it all around the burr tightly into place. Drive a nail into the centre of the forehead and one into the skull just behind each eye to hold the skin in place. That done sew up the skin all the way down to the base board and nail the skin to the base board all the way aroundf

We will now go back to the nose. Pull the under lip into position, catch it with a few stitches from side to side over the

top of the clay model. Insert clay where needed. Drive a small brad here and there to hold it securely. Pull down the nose skin. Fill out the upper lip with clay by crowding it into the place you cut the flesh out of the lip and turning the skin up on the inside, thus forming a pocket and making the lip. At the corner of the mouth fold in the lips naturally and hold with a wire nail partly driven into the head. Fill out the nose neatly and evenly by pressing clay through the nostrils or from beneath. Prick out the ears naturally into position; have them even. Secure them by tying them to the horns or each other. Use your ingenuity. Now place it where it will dry evenly. Keep it away from the direct heat of stove or furnace.

FINISHING.

While it has been drying you have made or secured your shield. Screw it on to the base board with long screws. Get a A shaped iron ¼ inch thick, 1 inch wide, drill screw holes into it. Invert it and screw it into position for a hanger on the shield, allowing it to project about 1¼ inches at the top to catch the hook on the wall. Hang it up at a convenient height to work. Scrape off or dig out all the clay that shows around the mouth and replace with papier mache. Fill the eye sockets with clay or papier mache. Place in the eyes and let dry. When dry take black wax, heat it and with a light brush paint the lips, nose and eyelids, pressing it firmly into all cracks with a warm iron or with your finger. Black wax is very much better than paint and gives a much neater finish. You can secure it from us or you can make it yourself with a little lamp blacks stirred into melted wax. The flesh color of the interior of the nostrils is produced with like colored wax. Dig out the nostrils and wax away inside. It adds much to the appearance. See that the eyelid is made to rest close to the eye. This is accomplished by use of the black wax painted on the eyelids. When it is hard clean off the eye. Then cut out the strings of the ears and remove card board. Cut off the wire brads around the horns close to the skin and do the same with all nails. If they show cover them with wax. Take your curry comb, or better still currier's comb, and comb out the skin and brush it off. Do it well and your head is finished. We frequently before we wax a head cover it with a flour paste and let it dry and then comb and brush it off. It cleans the hair and leaves it nice and bright. Oil the horns and it is done.

Animals that have no horns do not need a cut along the top of the head at all in order to skin. Buffalo, oxen steers, etc., will need to have the horns thoroughly boiled until they will slip from the porous bone within them. Cover the porous bone with arsenic and also the inside of the horn and allow to dry thoroughly. Then cover the porous bone with glue and place on the horn, attach the skin as in mounting elk, moose, etc.

MOULDING MOOSE NOSE, ETC.

A moose nose is a very difficult thing to do properly. A good way is to shave off a moose head from the eyes to the nose and grease the shaved part thoroughly, then take bagging, soak it in plaster of paris of the consistence of cream. Place one piece from the eyes all around one side to the end of the nose. The separating part will be along the top of the nose and along the centre of the under jaw to the end of the lip. Do the same on the other side. Let it dry, then peel it off and you have two moulds the exact shape of the nose and face. Shellac these thoroughly and when dry grease them well and place bagging soaked as before into each mould. Leave it until thoroughly set, then pull it out. Trim the edges of the two halves nicely glue them together or wire them and you have a perfect nose. If you have not aead to shave take the head you have skinned, cover the flesh with a heavy coat of melted wax and proceed as above This plan is the only one that will give you a perfect moose head and is clean, simple and absolutely satisfactory.

MOUNTING WITH OPEN MOUTHS.

Some animal heads such as bear, wolf, lynx, lion, tiger, etc., are very realistic when mounted with open mouths.

In mounting on a shield you proceed as in mounting other heads in regard to placing the head on a base board by the aid of a scantling or piece of wood firmly imbedded in the skull with plaster of paris. In mounting with open mouth put the jaws into position and fix them there with a plentiful supply of clay. Then model your head all over with clay to the original size. When thoroughly dry and hard, place on your skin and when it is in position—with the eye holes over the eye sockets—drive a nail into the forehead and one at each corner of the eyes to hold it in position. Sew up the opening down the neck and nail the skin all around the base board.

Prick up the ears into position, with clay mould out the nose and lips and place in gums of clay and allow the whole to dry thoroughly. When dry dig out all the clay you can and replace with papier mache. Study a dog's mouth and note the formation of lips and gums and try to produce the same in your specimen. Mould out the throat and upper and lower jaw and again allow to thoroughly dry.

Now place a bed of papier mache in the eye sockets, from which you have already dug the clay and put in your eyes. Mould around them with black wax and see that the eyelids rest on the eyes naturally. If you cannot get the expression you want, soften the skin around the eye with cotton soaked in water, to which has been added a little carbolic acid — and when the eyelids are soft work them into position desired and place in the eyes. Now with black and flesh colored wax paint the lips, nose, gums, and upper portion of mouth inside. Note that the inside of the upper jaw is furrowed and mottled in color. Work in both colors of wax and with the rounded point of a piece of iron slightly warmed produce the furrowed roof of the mouth. If you were wise you took particular note of the shape of the tongue; if you were very wise you have preserved it in alcohol. Model a tongue out of a piece of pine or wax like the original. Attach it to a couple of stout wires and push it down the throat into positionf Remember if you are trying to make your head represent an animal ready to fight the tongue will be drawn back and arched and lightly touching the front teeth as if drawn out of harm's way. Watch the wrinkles in the nose that give it the snarling effect. Don't make it smile. Get a good picture, visitthe circus ar zoo, watch the animals feeding, snarling, quarrelling photograph them if you can and try to reproduce the effect in your specimens you mount from time to time. Above all things do not over-stuff. When you have placed in the tongue take warm wax and model it on to the throat inside and paint it in proper color. Comb out and brush the hair thoroughly Cut the card board from the ears. Screw on to a permanent shield and your head is finished. There is no branch of the wark more interesting than that of mounting heads and good work can be done from the start.